Commonwealth of Kentucky
Division for Air Quality

RESPONSE TO COMMENTS

ON TITLE V (DRAFT) NO. V-04-024
TENNESSEE VALLEY AUTHORITY
DRAKESBORO KY.
JANUARY 13, 2005
BEN MARKIN, REVIEWER
SOURCE I.D. #: 21-177-00006
SOURCE A.I. #: 3239
ACTIVITY #: APE20040002

SOURCE DESCRIPTION:

Tennessee Valley Authority (TVA) operates three coal fired electric generating boilers. The facility also includes coal handling equipment, limestone handling equipment, building heat boilers and heaters, and ash and gypsum disposal processes. All three electric generating units are equipped with selective catalytic reduction for NOx control. To control particulate matter and SO_2 emissions Units 1 and 2 are equipped with venturi type flue gas desulfurization scrubbers, and one is under construction on Unit 3.

Emission Factors were obtained primarily from AP-42 and stack test data.

The large boiler units are regulated by 401 KAR 61:015, Existing boilers. The newer coal handling is regulated by 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants. 40 CFR 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, is applicable to the newer limestone handling at the facility. 401 KAR 51:010 and 61:020, New and Existing processes, and 401 KAR 63:010, Fugitive emissions, covers the remaining units.

The three electric generating units have redistributed SO2 limits. They are source specific, and do not match those found in 401 KAR 61:015. Units number 1 and 2 also have increased opacity limits. 401 KAR 61:015 sets them at 20%. TVA followed the procedure found in 401 KAR 50:055 to increase these allowables while meeting the particulate matter emission limits.

PUBLIC AND U.S. EPA REVIEW:

On August 18, 2004, the public notice on availability of the draft permit and supporting material for comments by persons affected by the plant was published in *The Leader-News* in Muhlenberg, Kentucky. The public comment period expired 30 days from the date of publication. Comments were received from Robert Ukeiley, Attorney at Law, Berea, Kentucky on September 15, 2004 and Tennessee Valley Authority on September 16, 2004, respectively. Attachment A to this document lists the comments received and the Division's response to each comment. Minor changes were made to the permit as a result of the comments received, however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed. Please see Attachment A for a detailed explanation of the changes made to the permit. The U.S. EPA has 45 days to comment on this proposed permit. If no comments are received from U.S. EPA during this period, the proposed permit shall become the final permit.

ATTACHMENT A

Response to Comments

Comments on the Paradise Fossil Power Plant (TVA) Draft Title V Air Quality Permit submitted by Robert Ukeiley, Attorney at Law, Berea, Kentucky, on behalf of Kentucky Heartwood, the Center for Biological Diversity, the Sierra Club, Hilary Lambert, and Preston Forsythe.

By letter dated September 15, 2004, Robert Ukeiley submitted extensive comments on the draft Title V permit issued for the Tennessee Valley Authority's Paradise Fossil Plant. These comments were submitted on behalf of the Sierra Club, the Center for Biological Diversity, and two individuals.

Comment No. 1: PSD IS AN APPLICABLE REQUIREMENT FOR THE THREE MAIN BOILERS WHICH NEEDS TO BE INCLUDED IN THE PERMIT.
The Prevention of Significant Deterioration (PSD) provisions of the Clean Air Act's New Source Review program, 40 CFR 52.21, is an applicable requirement with regard to nitrogen oxides (NOx) emissions from TVA Paradise Units 1, 2, and 3 because TVA modified those units after 40 CFR 52.21 became effective but before Kentucky had an approved PSD program in its SIP. Therefore, the PSD provisions must be include in TVA Paradise's Title V permit.

Specifically, the modifications that made PSD applicable with regard to NOx are: The work was essentially the same at all three units. It included the replacement of all cyclone burners attached to each boiler and the replacement of the lower furnace walls, floor and headers. EPA Enforcement Ex. 273; EPA Enforcement Ex. 279, at 40-42 (Hekking's pre-filed testimony); TVA Ex. 4, at 23-26 (Golden's pre-filed testimony). Through these projects, TVA replaced all fourteen cyclone burners at each of Units 1 and 2 and replaced all twenty-three cyclone burners at Unit 3. In addition, TVA cut out and replaced the waterwall below 465 feet, including the lower headers and floor at Unit 1. TVA performed the same work at Unit 2. At Unit 3, in addition to the twenty-three cyclones, TVA replaced the waterwalls between 418 feet to 501 feet. TVA Ex. 4, at 23-25 (Golden's pre-filed testimony); EPA Enforcement Ex. 279, at 42 (Hekking's pre-filed testimony). The magnitude of the work at each of these units was significant. Indeed, TVA had to construct monorails at the front and rear walls for lifting and positioning the cyclones at each unit. EPA Enforcement Ex. 279, at 43 (Hekking's pre-filed testimony). TVA installed a trolley system to transport the cyclones in and out of the building, and TVA constructed rigging inside the furnace to assist in attaching the wall panels and floor panels. Id. After approval from the Board of Directors and after years of planning, the central office's Fossil and Hydro Power Division performed work on these units sequentially. [FN7] TVA implemented the work at Unit 3 first, beginning in the Fall of 1984 and requiring the unit to be shut down for six months. It then worked on Unit 1, shutting it down for approximately 6.5 months beginning in March of 1985. Finally, TVA performed the work on Unit 2 beginning in November of 1985 and lasting 4.5 months. In each case, the units were shut down for periods well beyond the four weeks typical of scheduled maintenance outages. The work at Unit 1 and 2 required the replacement of approximately 18.5% of the total tubing in the boiler. TVA Ex. 4, at 23, 25 (Golden's pre-filed testimony). TVA replaced approximately 19.4% of the total tubing in Unit 3's boiler. Id. at 26. In re: Tennessee Valley Authority, 9 E.A.D. 357, 2000 WL 1358649 (EPA ALJ Sept. 15, 2000) at Appendix A, p. 108-109. In support of our claim that PSD for NOx is an applicable requirement, we hereby incorporate by reference all of the evidence, including the transcripts of the live testimony,

from In re: Tennessee Valley Authority, 9 E.A.D. 357, 2000 WL 1358649 (EPA ALJ Sept. 15, 2000).

The fact that the United States Court of Appeals for the Eleventh Circuit subsequently found that the Administrative Compliance Order issued to TVA was facially unconstitutional is not relevant to this comment. We are saying that if you review the information that EPA Enforcement presented to the EAB during the course of the proceeding in light of the arguments made by EPA Enforcement and even use the emission test more favorable to TVA (actual to projected actual) and use the PSD regulations that we applicable at the time of the modification, you will independently determine that there was indeed a major modification at all three units at TVA Paradise so that PSD applies to those units for NOx. [Footnote 1: We are not saying that the "actual to projected actual" test is legally mandated. We are merely saying that even using this test, which is the most favorable to TVA, you will still find a significant increase in NOx.] It is important to remember that the Eleventh Circuit's decision was based on facial analysis of Administrative Compliance Orders which does not describe any particular process for its issuance. However, in the TVA case, TVA was actually given extensive process to try to defend its case. See e.g. In re: Tennessee Valley Authority, 9 E.A.D. 357, 2000 WL 1358649 (EPA ALJ Sept. 15, 2000) at 8. Even after this trial type process, the evidence showed that TVA had indeed performed major modifications at TVA Paradise. Therefore, the Title V Permit must include BACT limits for Units 1, 2 and 3 for NOx. We suggest that you set a temporary BACT limit of 0.085 lbs/MMBtu NOx for Unit 1, 0.1 lbs/MMBtu NOx for Unit 2 and 0.15 lbs/MMBtu based on a thirty day rolling average. The limits for Units 1 and 2 are based on TVA Paradise's actual emissions during the 2002 ozone season. See Exhibit 1. Obviously, what a particular unit achieves is achievable. Our purposed limit for Unit 3 is based on the NSPS limit. These temporary limits should go into effect immediately and should apply year round. The final BACT limits will be significantly lower but may require construction in order to comply. The Title V permit should also include a compliance schedule which requires TVA to submit a full PSD application within 3 months of the issuance of the permit. To the extent that pre-construction monitoring is necessary, TVA should be given additional time to complete its pre-construction monitoring. While this is an aggressive schedule, the people of Kentucky should not be forced to endure TVA Paradise's illegal pollution any longer than necessary.

Division's response:

Kentucky DAQ is aware of the current enforcement action against TVA.

EPA initially pursued TVA for alleged NSR violations through the Administrative Compliance Order (ACO) process. However, in June 2003 a three-judge panel of the 11th Circuit Court of Appeals ruled that instead of following the ACO process EPA must "prove the existence of a CAA violation in district court, including the alleged violation that spurred EPA to issue the ACO in this case." [Tennessee Valley Authority v. Whitman, 336 F.3d 1236, 1260 (11th Cir. 2003)]. U.S. EPA sought review of that decision in the U.S. Supreme Court. In May 2004 the Supreme Court declined to grant EPA's request for review of the 11th Circuit ruling. [Leavitt v. Tennessee Valley Authority, 124 S.Ct. 2096 (2004)]. To date, there is no judicial determination of the merits of TVA's alleged NSR violations.

The U.S. EPA considers this an active enforcement case and is proceeding. Upon settlement or judicial ruling Kentucky DAQ will incorporate those terms and conditions into this permit.

Comment No. 2:
THE PERMIT SHOULD INLCUDE A COMPLIANCE SCHEDULE TO REQUIRE THE SCRs TO BE OPERATED YEAR ROUND PURSUANT TO 401 KAR 50:055 SECTION 2(5). 401 KAR 50:055 SECTION 2(5) provides that: at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.

Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. Recently, in the case of Sierra Club v. EPPC and TGC, LLC, FILE NO. DAQ-26003-037 FILE NO. DAQ-26048-037, the law firm of Hunton and Williams, a noted utility industry law firm, took the position that 401 KAR 50:055 Section 2(5) and similar regulations in other states would require the year round operation of SCRs once they are installed. DAQ seemed to support Hunton and Williams position on this issue. However, a review of the information on the US EPA Air Markets Division web page, which is hereby incorporated by reference, indicates that TVA does not run the SCRs on Paradise year round. Therefore, the permit should include a compliance schedule that requires TVA to operate the SCRs on Paradise year round. Section B.7(a) of the draft permit has some language that does not appear in 401 KAR 50:055 Section 2(5). It states that the source shall operate control equipment to maintain compliance with permitted emission limits. As long as it is clear that Section B.7(a) is a separate requirement that has no bearing on requirement to also comply with 401 KAR 50:055 Section 2(5), Section B.7(a) does not present any problems. However, if Section B.7(a) is meant to limit the applicability of 401 KAR 50:055 Section 2(5), then Section B.7(a) must be removed or altered for there is no legal basis to such an interpretation.

Division's response:

The SCR's are not subject to an applicable standard other than 401 KAR 51:160, NOx requirements for large utility and industrial boilers. It is DAQ's interpretation of 401 KAR 50:055, Section 2, Compliance with Standards and Maintenance Requirements, that this section applies to sources subject to an emission standard. The only standard applicable to these units is that they have sufficient NOx allowances to address emissions during the ozone control period of May through September of each year. There is no requirement for TVA to operate their SCRs during the ozone control period, since they could instead purchase allowances to comply with 401 KAR 51:160. As there is no requirement in the permit for TVA to operate the SCRs, and there is no permit limit that requires operation of the SCRs in order to preclude the applicability of an air pollutant standard, DAQ does not concur that 401 KAR 50:055, Section 2(5) applies.

Comment No. 3: PSD IS APPLICABLE TO EMISSION UNITS GACT7, GACT8, GACT 10 AND GACT 11. To begin with the draft permit does not state that the conditions in Section B for Emission Units GACT7 or GACT8 or in Section D(3) is to limit the applicability of PSD. However, the SOB does so state. The permit should be made clear to state that this condition is to limit the applicability of PSD if that is ultimately what this condition requires. However, it appears that this synthetic minor cap for these units is not currently being met and is impossible to meet. Section B, Condition 2(a) sets a limit for the three units conveying transfer point, silo loading, and surge hopper and weigh hopper of 632 tpy PM (51.4 lbs/hr + 51.4 lbs/hr + 41.6 lbs/hr * 8760 hr/yr / 2000 lbs/ton = 632.472 tpy). However, the synthetic minor cap needs to be at 25 tpy which would

equate to approximately 1.9 lbs/hr limit for each of these emission units. Even this limit of 1.9 lbs/hr would not include fugitive emissions from EQPT16 Limestone Receiving, EQPT18 Limestone Stock-out and Storage, and EQPT20 Limestone Silo Unloading which also must be included in the synthetic minor cap. See 401 KAR 51:017 § 8(c). Furthermore, the synthetic minor cap would need to include a limit of both PM at 25 tpy and PM10 at 15 tpy. See Id. At § 22. See also Exhibit 2 at Page 2, Comment 5 (KY DAQ states "Both Pm and PM10 are regulated in the Kentucky PSD Regulation). Because there is no evidence that GACT7 and GACT8 have or could meet these limits of 25 tpy PM and 15 tpy PM10, these sources constitute a major modification. Therefore, the permit should include a compliance schedule to require TVA to submit a PSD permit application for these sources. [Footnote 2: This also means that other facilities in Muhlenberg County, such as Peabody's Thoroughbred Generating Station should have to re-submit there [sic] PM increment modeling as GACT7 and GACT8 established the minor source baseline date for PM in Muhlenberg County but Peabody's modeled [sic] was based on the minor source baseline date being established by Thoroughbred Generating Station.] Finally, GACT10 and GACT11 should be also be considered part of the major modification that involved GACT7 and GACT8. Although construction is staggered, all of these units are obviously all part of the same project. Thus, the permit should also contain a compliance schedule that requires GACT10 and GACT11 to be part of the PSD permit application, which TVA is required to submit. [Footnote 3: We will note for the record that all of the emission limits and standards for GACT7, GACT8, and GACT11 including Condition D(3) are not enforceable as a practical matter and do not contain monitoring and reporting to assure compliance. For example, there is no performance testing required and no CEMS or COMS required.]

Division's response:

DAQ does not concur, but upon further investigation has revised the statement of basis to include emission points GACT7, GACT8 (existing limestone handling systems), GACT10 and GACT11 (limestone handling systems under construction).

TVA obtained a NSR permit on 8/17/1979 based on an application submitted 11/2/1978. This was for the coal washing plant. Emissions were not subject to a full PSD/NSR review at that time because the construction was limited to less than 50 tons/year, 1000 lbs/day and 100 lbs of total suspended particulates. This action was performed under a previous version of PSD/NSR regulations, when the applicable threshold for uncontrolled emissions was 50 tons.

A Federal Consent decree required TVA to install control equipment for the control of particulate and sulfur dioxide emissions. TVA had to build support facilities (limestone handling). These facilities were built without a permit from Kentucky, under a federal order. Operation at the allowable and actual hourly emission rates would have resulted in an annual particulate emission rate of more than 25 tons per year. Operating permit O-86-75 was conditioned to limit annual emissions rates to less than 25 tons per year, to preclude applicability of PSD/NSR. The limit established by O-86-75 remains in effect for particulate emissions.

Units GACT10 and GACT11 are not considered part of GACT7 and GACT8 because these units are associated with a new limestone handing system and the new scrubber on Unit 3. A construction permit application for this limestone handling system was submitted to the Division on March 3, 2003 and approved on August 6, 2003. The GACT10 and GACT11 project will primarily support the scrubber currently under construction for Unit 3, but will have redundant capacity that can be used to feed the Unit 1 and 2 scrubbers when needed.

Comment No. 4: THERE IS NO MONITORING FOR OPACITY.

The Statement of Basis (SOB) states that Method 9 is of questionable use for TVA Paradise Boilers 1 and 2. However, the SOB also admits that there is no other monitoring in place for the opacity limit. Title V and its implementing regulations require that there be monitoring in place. Thus, the draft permit's lack of monitoring renders the permit deficient. Condition G(a)18 must be removed as it would allow the inclusion of monitoring for opacity without public participation. Rather, this permit needs to include monitoring and reporting for compliance with the opacity limit for Boilers 1 and 2. 40 CFR Part 51, Appendix P requires TVA Paradise to have a continuous opacity monitoring system (COMS) for each of the main boilers. Therefore, the Title V permit must require a COMS and the COMS should be used to monitor compliance with the opacity limit for Units 1 and 2. [Footnote 4: The Permit must also require a CEMS for NOx.] Furthermore, for Unit 3, the draft permit requires a Method 9 test to monitor for opacity compliance "as required by the division." This monitoring is not sufficient to assure compliance. To begin with, Method 9 cannot be used at night or when there is cloud cover. Thus, there is no assurance of compliance with the opacity limit for at least a third and probably two-thirds of the time. In addition, there is no specification of the frequency of the Method 9 test. If there is no specification of the frequency, then there is not adequate monitoring to assure compliance. As with Units 1 and 2, there is no logical reason to not specify that COMS shall be used to assure compliance with the opacity limit for Unit 3. As to the CAM requirement for opacity, again, there is no defensible reason to require a Method 9 test if the COMS shows an exceedance. Again, a Method 9 test cannot be done at night or in cloudy weather. In addition, the Method 9 test will be done after the COMS violation so that the Method 9 test will not provide information about whether there was a violation at the time that the COMS reading demonstrated a violation. Rather, CAM should be simply based on COMS. Furthermore, as to the CAM requirement for PM, PS 11 should be used. An one time stack test and COMS correlation is not sufficient to account for changes at the plant, especially changes in the quality of the coal being burned..

Division's response:

The Division considers the assertion that continuous opacity monitors (COMs) must be installed and used on Paradise Units 1 and 2 in accordance with 40 C.F.R. Part 51, Appendix P, as incorrect. Section 6.1 of Appendix P of the same regulation expressly provides that ***alternative*** *monitoring requirements may be prescribed if a specified monitoring device "would not provide accurate determinations of emissions (e.g., condensed uncombined water vapor may prevent an accurate determination of opacity using commercially available continuous monitoring systems)." The Division is aware that Units 1 and 2 (and soon Unit 3) are scrubbed and have wet plumes, and consistent with the Agreed Order, Permit Condition G(a)18 requires TVA to propose an alternative method within 90 days of issuance of the permit.*

The frequency of determining compliance with EPA method 9 is established in Condition No. 4g of the permit.

CAM requirements will be applicable to the unit upon renewal of the initial Title V permit [40 CFR 64]. The request that COM readings be used in lieu of Method 9 to determine compliance would establish a different substantive requirement for the facility, contrary to EPA guidance that the Title V permitting process should not result in new substantive requirements but rather should identify and collect in one permit existing applicable requirements. See 57 Fed. Reg. 32,250, 32,251 (July 21, 1992). Substituting COM readings for Method 9 as the compliance method would make the opacity standard more stringent unless some measure was taken to offset this (e.g., employing a de minimis exclusion to a percentage of the COM readings).

See, e.g., Sierra Club v. Tennessee Valley Authority, Case No. CV-02-HS-2279-NW (N.D. Ala. Sept. 14, 2004); National Parks Conservation Association v. Tennessee Valley Authority, 175 F.Supp.2d 1071 (E.D. Tenn. 2001). There are no existing regulatory requirements for continuous monitoring for particulate matter in accordance with Performance Specification 11, which is requested for COMB1 and COMB2.

Comment No. 5: *THE PM MONITORING IS NOT SUFFICIENT*
The permit does not specify a method for the required PM stack tests for the main boilers. The permit must specify a PM test method which will test for filterable and condensable PM. See Exhibit 2 at Page 3, Comment 6. It seems Method 202 would be appropriate. In addition, the Opacity limit should be re-adjusted downward if any opacity reading is lower than 61% during the stack test.

Division's response:

PM test methods (and other applicable test methods) are established by 401 KAR 50:015, Section 1 that is incorporated by reference through Condition No. D2. There is no regulatory basis for such an adjustment of the 61% opacity standard for Unit 1 or the 50% opacity standard for Unit 2. Further, the alternate opacity standards for these units were not established to set a minimum opacity surrogate for judging particulate matter performance. They were established at a level correlated to a particulate matter emission rate, determined by stack testing, deemed to be well within the emission standard. Finally, Unit 1 and Unit 2 are tested quarterly to determine compliance with the particulate matter emission standard.

Comment No. 6: THE PARAMETERTIC MONITORING FOR THE FGD DOES NOT APPEAR TO BE SUFFICIENT
Condition B.4(g) for Unit 1 allows the use of pump amperage as a surrogate for flow rate of make-up scrubbing liquor. It would seem that the flow rate could be affected by factors other than the pump amperage such as physical damage to the pump. Monitoring the actual flow rate seems to be the better approach.

Division's response:

Apart from asserting that flow rates could be affected by factors other than pump amperage, no technical support is provided for this comment. The reliable technical way to conduct periodic monitoring for particulate matter performance on Unit 1 and Unit 2 is to monitor the scrubber pump motor amps. The motors that drive the pumps that deliver scrubber slurry to the venturi sections on each unit do so at a consistent power consumption rate. This rate is tracked by monitoring the pump motor amperage level. Changes in performance correlate to changes in pump motor power consumption rate and this would be indicated by a change in amperage level.

The use of flow monitors in this application would not yield a more accurate measure of flow rate than currently provided by the pump motor amperage reading. There are not appropriate sections of piping on the discharge side of the scrubber slurry pumps to take accurate flow monitor readings. Flow monitors require laminar flow and without such will report fluctuating flow measurements. Thus improperly installed flow monitors would provide only an indication of flow that would be

inferior to simply monitoring pump amperage.

Comment No. 7: *MANY EMISSION UNITS DO NOT HAVE LIMITS OR STANDARDS THAT ARE ENFORCEABLE AS A PRACTICAL MATTER AND DO NOT HAVE MONITORING AND REPORTING TO ASSURE COMPLIANCE*

For emission units Comb4, Comb5, EQPT36, and EQPT22, there needs to be monitoring for the opacity limit. Also, AP-42 should not be the basis of compliance demonstration. Rather, the permit should require periodic stack tests to obtain site specific data. The PM limit for GACT4 is based on a 99.99998% control. Yet, there is no monitoring to assure compliance with this level of control. A strict monitoring program must be but [sic] in place to assure compliance with a 99.99998% control efficiency. Also, there is no monitoring to assure compliance with the opacity limit for GACT4. For GACT6, Condition 2(a) is not enforceable as a practical matter as it does not specify control measures that must be in place. There is also no monitoring to assure compliance with Condition 2(b). Finally, the narrative should explain why EPQT12 is rated at 3,000 tons per hour while all of the other equipment is rated at 2,000 tons per hour. For EQPT15, there is an operating limit of 5 tons/hr as well as 350 tons/year. However, the permit only requires monitoring of the processing on a monthly basis. Monitoring on a monthly basis is not adequate to assure compliance with a hourly processing rate. In addition, there is no monitoring or testing for the opacity and particulate limits. There is no authority for assuming compliance. Rather, the applicable regulations require monitoring to assure compliance. Monitoring should be achieved using a COMS and a PM CEMS in compliance with PS 11.

Division's response:

The opacity monitoring for GACT4 has been addressed. Periodic stack testing for the units is not warranted. Monitoring requirements will include "The permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are seen (not including condensed water vapor within the plume), then the opacity shall be determined by Reference Method 9. If emissions are in excess of the applicable opacity limit, then an inspection of control equipment shall be initiated for all necessary repairs."

New Source Performance Standards do not require stack testing or opacity readings for newly installed units of similar sized, oil-fired units. Compliance assurance based on fuel type and AP-42 emission factors is reasonable. AP-42 factors for oil-fired boilers and heaters are based on decades of sampling data and carry the highest confidence level for emission factors.

The origin of the assertion that the PM limit for GACT4 is based on 99.99998% control efficiency is unclear. The correct control efficiencies are set forth in the original Title V application that TVA submitted in November 1996. These estimates are found in Table 4.2 Paradise Fossil Plant: Maximum Particulate Matter (PM) Emissions from Significant Sources for the Solid Fuel Handling Process. For the Three Coal Breakers and Five Conditioners (Emission Point 16) the control efficiency ranged from 85% to 97% depending on the control technology applied at the various coal processing points. For Coal Conveying and Bunker Room (Emission Point 17) the control efficiency ranged from 70% to 91% depending on the control technology applied to the various coal transfer points. It is also noted that the

maximum estimated particulate matter emission rate of 10.57 lbs/hr from this emission unit is well below the 86.9 lbs/hour limit.

The 3000 tons/hour rating for EQPT12 (Emission Point 15), Receiving and Reclaim Hoppers, is simply a description of its capacity as provided in the application. Concerning EQPT15 (Emission Point19), Two Lime Storage Silos: The 5 ton/hr limit on process weight throughput is a limit carried forward from permit number O-86-75. At one point in time (approximately 1978-1983), Muhlenberg County was non-attainment for total suspended particulates (TSP). Therefore, pursuant to regulation 401 KAR 50:012, this limit has not been relaxed. As stated in the permit, compliance with this limit is assumed when the required bagfilters are maintained and operated in accordance with manufacturer's specifications. For purposes of clarity, the bagfilters have been added to the emission point description, and operation of the bagfilters any time that material is being processed into or out of the silos has been added as an operating limit. It is unnecessary to monitor hourly process weight. Monitoring this emission unit with COMS or PM CEMS is not necessary.

The draft permit identifies enforceable compliance methods for EQPT12. The amount of lime processed must be monitored and recorded. This provides a very practical means of enforcing the specified emission requirements. The Division considers good operating practices and maintenance of this equipment as adequate to ensure compliance with the particulate matter and opacity standards.

Comment No. 8: GACT5 SYNTHETIC MINOR CAP IS NOT SUFFICIENT AND THERE IS NOT SUFFICIENT MONITORING

For GACT5, the SOB and the draft permit do not appear to be consistent. The SOB states that the coal washing unit was build [sic] under the old PSD regulations that only required a 100 lb/hr, 1000lb/day, and 50 tn/yr limit on particulate matter emissions. Yet Condition 2(a) states that the PM limits are imposed to prevent the applicability of the current PSD regulations, 401 KAR 51:017. However, if this is the case, the limit would have to be 25 tpy PM and 15 tpy PM10. See 401 KAR 51:017 § 22. This confusion is exacerbated by the fact that the description of this unit does not include the year it commenced construction, although for other units, the permit does include the date that construction commenced. This needs to be clarified and corrected to 25 tpy PM and 15 tpy PM10 if this is indeed a condition to prevent the applicability of 401 KAR 51:017. See Id. At § 22. In addition, there is no monitoring to assure compliance with the opacity and PM limits and the PM limit is not enforceable as a practical matter which synthetic minor caps must be. As explained above, there is no authority to allow for the assumption of compliance. Rather, there must be monitoring and reporting to assure compliance. Again, we believe that COMS and a PM CEMS, in compliance with PS 11, are appropriate to assure compliance, especially considering that the synthetic minor cap is set so close to the PSD significant level. Finally, the manufactures specifications referenced in Condition 7(a) must be specifically identified in the permit and a copy of these specifications must be included in the permit folder. There must be monitoring and reporting to assure compliance with this requirement.

Division's response:

The Permit Statement of Basis correctly states that GACT5, the coal-washing plant,

was constructed before the current PSD regulation became effective. See response to Comment No. 3. The regulation in effect for this area at that time was 401 KAR 51:050. Under that regulation, the applicable emission threshold was 50 tons per year. The draft permit requires that the amount of coal processed and hours of operation be monitored (GACT5, Section B, Condition 4). This provides a practicably enforceable means of tracking compliance with the applicable limitations.

Comment No. 9: THERE MUST BE REPORTING OF ANY MONITORING RESULTS
Condition F.5 must require the submission of all COMS and CEMS data. See 42 U.S.C. § 7661c(a); 40 C.F.R. § 70.6(a)(3)(iii)(A)

Division's response:

The Division considers that Section F of the draft permit addresses the requirements and is consistent with 42 U.S.C. § 7661c(a) and the EPA regulation implementing this provision, 40 C.F.R. 70.6(a)(3)(iii)(A).

Comment No. 10: THE NEW BOILER MACT IS AN APPLICABLE REQUIREMENT
US EPA recently finalized a MACT standard for Industrial, Commercial, and Institutional Boilers and Process Heaters. See 69 Fed. Reg. 55217 (Sept. 13, 2004). This new MACT is an applicable requirement for COMB4 (26) Unit 1 Building Heat Boiler and Unit 2 Building Heat Boiler, COMB5 (28) Unit 3 Building Heat Boiler, EQPT22 (29a) Eight Dravo Heaters, and EQPT36 (29b) Three Dravo Heaters. Therefore, the new MACT should be included in the permit. The permit should identify which particular requirements in the new MACT apply to each emission unit in order to be practically enforceable.

Division's response:

The Division acknowledges that the regulations are applicable to COMB4 (26) Unit 1 Building Heat Boiler, Unit 2 Building Heat Boiler, and COMB5 (28) Unit 3 Building Heat Boiler for initial notification requirements (40 CFR 63.9(b)), but there are no applicable emission standards, monitoring, recordkeeping and reporting for the units at this time. The applicable regulations will be added to the appropriate sections of the permit.

EQPT22 (29a) Eight Dravo Heaters and EQPT36 (29b) Three Dravo Heaters are classified in the small liquid fuel subcategory as defined in 40 CFR 63.7575. As such these emission units are not subject to any requirements of 40 CFR 63, Subpart DDDDD and 40 CFR 63.9(b).

Comment No. 11: THE STATEMENT OF BASIS DOES NOT PROVIDE A FACTUAL AND LEGAL BASIS FOR THE PERMIT CONDITIONS.
The Statement of Basis (SOB) is inadequate. For example, the SOB does not provide any explanation for the applicability of PSD to Boilers 1, 2, and 3. It makes no mention of the EPA's enforcement action against TVA Paradise and the EAB's decision in that case. The SOB says that the three units have "redistributed SO2 limits" but does not provide the factual or legal basis for these limits. The SOB does not explain the legal or factual basis for Condition B.7(a). The SOB does not provide the factual and legal basis for the PM stack testing requirements of the COMS and

Method 9 testing. The SOB did not explain the factual and legal basis for allowing pump amperage to be a surrogate for flow rate for the FGDs.

Division's response:

The legal and factual basis is contained in the State Implementation Plan (SIP). [40 CFR 52 Subpart S—Kentucky. *The statement of basis fulfills the requirement of 40 CFR 70.6. The basis for the "redistributed SO_2 limits" was not referenced in the Permit Statement of Basis. The draft permit properly provides the basis for these emission limits; see Condition 2c in the Boiler Unit provisions of the permit. We concur that a description of this emission limit merits note in the statement of basis, and we have amended the "Comments" section of the statement of basis to include that information.*

Comment No. 12: THE PERMIT MUST CONTAIN LANGUAGE THAT ALLOWS FOR THE USE OF ANY CREDIBLE EVIDENCE.

The Permit must contain language that allows for the use of any credible evidence. EPA supports the inclusion of credible evidence language in all Title V permits. As explained by the Acting Chief of US EPA's Air Programs branch: It is the United States Environmental Protections Agency's position that the general language addressing the use of credible evidence is necessary to make it clear that despite any other language contained in the permit, credible evidence can be used to show compliance or noncompliance with applicable requirements. . . . [A] regulated entity could construe the language to mean that the methods for demonstrating compliance specified in the permit are the only methods admissible to demonstrate violation of the permit terms. It is important that Title V permits not lend themselves to this improper construction.

Letter from Cheryl L. Newton, Acting Chief, Air Programs Branch, EPA, to Robert F. Hodanbosi, Chief, Division of Air Pollution Control, Ohio Environmental Protection Agency, dated October 30, 1998. While anyone may rely on all credible evidence regardless of whether this condition appears in the permit, DAQ should include credible evidence language in the permits and permit template to make the point clear. Specifically, EPA has recommended that the following language be included in all Title V permits: Notwithstanding the conditions of this permit that state specific methods that may be used to assess compliance or noncompliance with applicable requirements, other credible evidence may be used to demonstrate compliance or noncompliance. Letter from Stephen Rothblatt, Acting Director, Air and Radiation Division, US EPA, to Paul Deubenetzky, Indiana Department of Environmental Management, dated July 28, 1998.

Division's response::

The Permit Statement of Basis correctly states that Kentucky has not adopted the EPA Credible Evidence rule as part of its SIP. No further response to this comment is needed.

***Comments on the Paradise Fossil Power Plant (TVA) Draft Title V Air Quality Permit submitted by* Janet K. Watts, Manager of Environmental Affairs, TVA, Chattanooga.**

PERMIT APPLICATION SUMMARY FORM

COMMENT No1

1. EMISSIONS SUMMARY (p. 2) - Actual and potential emissions for each pollutant could be presented here as reported on the 2003 Emissions Survey summarized by Kentucky Division for Air Quality on August 2, 2004, as this is the most recent summary available.

Division's response:

The draft permit was issued before the 2003 data was available, however the emission summary has been updated to include the 2003 actual emissions.

COMMENT No 2

2. SOURCE PROCESS DESCRIPTION (p. 2) - Should be changed as indicated: "Tennessee Valley Authority operates three coal-fired electric *steam* generating boilers. All three are equipped with selective catalytic reduction for NOx control. *To control particulate matter and SO_2 emissions,* Units 1 and 2 are equipped with venturi type flue gas desulfurization scrubbers. *Particulate matter emissions from Unit 3 are controlled by electrostatic precipitators with flue gas conditioning, as needed. A flue gas desulfurization scrubber is under construction on Unit 3 with projected start-up in late 2006.* ~~and one is under construction on Unit 3 to control particulate matter and SO2 emissions~~. The facility also includes coal handling equipment, limestone handling equipment, building heat boilers and heaters, and ash, gypsum, and coal wash plant disposal processes."

Division's response:

The changes have been made in the permit.

PERMIT STATEMENT OF BASIS

COMMENT No 3

(p. 1) - Should be changed as indicated: "All three electric generating units are equipped with selective catalytic reduction for NO_x control. To control particulate matter and SO_2 emissions Units 1 and 2 are equipped with venturi type flue gas desulfurization scrubbers. *Particulate matter emissions from Unit 3 are controlled by electrostatic precipitators with flue gas conditioning, as needed. A flue gas desulfurization scrubber* ~~and one~~ is under construction on Unit 3 *with projected start-up in late 2006."*

Division's response::

Changes have been made in the Statement of Basis.

DRAFT PERMIT

COMMENT No 4

SECTION B

COMB1 (Emission Point 01) Boiler Unit 1

1. Description (p. 2)
   - Add to Emission Unit Description - Secondary fuels: "*No. 2 fuel oil in addition to petroleum coke, wood waste, used oil with less than 50 ppm PCBs, nonhazardous solvents, and oil-contaminated materials/rags and paper as submitted on Form DEP7007A in the permit application.*"

Division's response:

The secondary fuel has been added to the description as requested. This approval is only for compliance with standards under the Clean Air Act. It does not relieve the need to obtain other permits or approvals from Division of Waste Management or under TSCA(Toxic Substances Control Act).

COMMENT No 5

2. Applicable Regulations
   - Specific Monitoring Requirements, 4.g.1 (p. 3) — Revise the sentence as follows: "Flow rate of ~~make up~~ *recycle* scrubbing liquor. Pump amperage for each *recycle* pump can be used as a surrogate for flow rate."

Division's response:

The change has been made.

COMMENT No 6

- Specific Monitoring Requirements, 4.g.2 (p. 3) — TVA demonstrated in July 1998 that at minimum achievable differential pressure through the venturi sections and at high, medium and low loads Units 1 & 2 operate well within the mass emission limit. This information was previously submitted to the Division and is an attachment to these comments. As discussed in our meeting on September 13, 2004, the Division will take into account the conclusions of the report that allow this condition to be dropped from the proposed permit.

Division's response::

*The Division does not concur. Specific Monitoring Requirements,*4.g.2 (p. 3) *is a monitoring requirement to record the pressure drop across the scrubber at least once per shift. These records are useful to ensure proper operation of an air pollution control device that is used to ensure compliance with the SO2 and PM allowable under 401 KAR 61:015. Compliance with the SO2 allowable can be determined through the SO2 CEM. It is our understanding that the source's position is that compliance with the PM limit is assured by compliance with the SO2 limit, as there is a common control device. The Division does not concur that this is the case in all circumstances. Compliance with the S02 limit is a function of the control device and concentration of sulfur in the fuel.*

Monitoring of the pressure drop is part of the compliance assurance that particulate emissions and opacity are in compliance. This condition only requires some periodic recordkeeping to ensure proper operation of the control device, and is not a direct measure of compliance. In light of the fact opacity can not be monitored

consistently at this stack to ensure compliance, the Division believes it is justified in requiring that records be maintained and be made available to the Division to demonstrate good air pollution control operation.

COMMENT No 7

COMB2 (Emission Point 02) Boiler Unit 2

1. Description (p. 5)
   - Add to Emission Unit Description - "*Secondary fuels: No. 2 fuel oil in addition to petroleum coke, wood waste, used oil with less than 50 ppm PCBs, nonhazardous solvents, and oil-contaminated materials/rags and paper as submitted on Form DEP7007A in the permit application.*"

Division's response:

The addition has been made. The secondary fuel has been added to the description as requested. This approval is only for compliance with standards under the Clean Air Act. It does not relieve the need to obtain other permits or approvals from Division of Waste Management or under Toxic Substances Control Act (TSCA).

COMMENT No 8

2. Applicable Regulations
   - Specific Monitoring Requirements, 4.g.1 (p. 6) — Revise the sentence as follows: "Flow rate of ~~make up~~ *recycle* scrubbing liquor. Pump amperage for each *recycle* pump can be used as a surrogate for flow rate."

Division's response:

The change has been made.

COMMENT No 9

- Specific Monitoring Requirements, 4.g.2 (p. 3) — TVA demonstrated in July 1998 that at minimum achievable differential pressure through the venturi sections and at high, medium and low loads Units 1 & 2 operate well within the mass emission limit. This information was previously submitted to the Division and is an attachment to these comments. As discussed in our meeting on September 13, 2004, the Division will take into account the conclusions of the report that allow this condition to be dropped from the proposed permit.

Division's response:

The Division does not concur. Specific Monitoring Requirements, 4.g.2 (p. 3) is a monitoring requirement to record the pressure drop across the scrubber at least once per shift. These records are useful to ensure proper operation of an air pollution control device that is used to ensure compliance with the SO2 and PM allowable under 401 KAR 61:015. Compliance with the SO2 allowable can be determined through the SO2 CEM.

It is our understanding that the source's position is that compliance with the PM limit is assured by compliance with the SO2 limit, as there is a common control device. The Division does not concur that this is the case in all circumstances. Compliance with the S02 limit is a function of the control device and concentration of sulfur in the fuel. Monitoring of the pressure drop is part of the compliance

assurance that particulate emissions and opacity are in compliance. This condition only requires some periodic recordkeeping to ensure proper operation of the control device, and is not a direct measure of compliance. In light of the fact opacity can not be monitored consistently at this stack to ensure compliance, the Division believes it is justified in requiring that records be maintained and be made available to the Division to demonstrate good air pollution control operation.

COMMENT No 10

COMB3 (Emission Point 03) Boiler Unit 3

1. Description (p. 8)
   - Revise the Controls description as follows: "Selective Catalytic Reduction, Electrostatic Precipitators with flue gas conditioning as needed, and Dual Contact Flow Flue Gas Desulfurization Scrubber (under construction, *projected start-up late* 2006). *This unit can be operated with the scrubber by-passed, as needed.*"
   - Add to Emission Unit Description - "*Secondary fuels: No. 2 fuel oil in addition to petroleum coke, wood waste, used oil with less than 50 ppm PCBs, nonhazardous solvents, and oil-contaminated materials/rags and paper as submitted on Form DEP7007A in the permit application.*"

Division's response:

The secondary fuel has been added to the description as requested. This approval is only for compliance with standards under the Clean Air Act. It does not relieve the need to obtain other permits or approvals from Division of Waste Management or under TSCA(Toxic Substances Control Act).

COMMENT No 11

2. Applicable Regulations
   - Emission Limitations, 2.b (p. 8)—Revise to read: "Pursuant to 401 KAR 61:015, Section 4 (2), *and 401 KAR 50:055,* emissions shall not exceed twenty (20) percent opacity based on a 6-minute average*, except: (1) a maximum of forty (40) percent opacity shall be permissible for not more than one (1) 6-minute period in any sixty (60) consecutive minutes; and (2) during periods of malfunction, shutdown and startup."* Alternatively, this provision could read: *"Pursuant to 401 KAR 61:015, Section 4(2), and consistent with 401 KAR 50:055, emissions shall not exceed twenty (20) percent opacity based on a 6-minute average."*

Division's response:

The Division acknowledges this comment. 401 KAR 50:055 is a compliance requirement and cannot be used under specific opacity requirements.

COMMENT No 12

- Testing Requirements, 3.a (p. 8) As discussed in our meeting at the Division on September 13, 2002 this condition will be revised to read: "*The opacity trigger level for* ***COMB03 Boiler Unit 3*** *shall be 20%, based on a three-hour average.* The permittee shall submit, within six months from the issuance date of the proposed permit, a schedule to conduct at least one performance test for particulate within one year following the

issuance of this permit. ~~Opacity data from the Continuous Opacity Monitor (COM) obtained during the performance test shall be correlated with the particulate emission rate to establish an average opacity level pursuant to Condition 4.f below.~~ *If no additional stack tests are performed pursuant to Condition 4.d, the permittee shall conduct a performance test for particulate emissions within the third year of the term of this permit to demonstrate compliance with the applicable standard."*

This 20% opacity trigger level for Unit 3 is based on stack testing conducted in July 1991 that correlated compliance with the mass standard of 0.11 lbs/MM BTU up to an opacity of 36%. This information was submitted to the Division on July 29, 1991, and is an attachment to these comments. This correlation shows that the proposed action level of 20% (based on a three-hour average) provides sufficient compliance margin with the mass standard.

Division's response:

See response to comment number 14 below.

COMMENT No 13

- Testing Requirements, 3.b (p. 8) — Revise to read: "The permittee shall determine the opacity of emissions from the stack by EPA Reference Method 9 *for determination of compliance with the opacity standard* upon request by the Division."

  Consistent with 401 KAR 50:055, compliance with the opacity standard is determined by Method 9 observations. Opacity data derived from the use of COMS provides an indication of good operation of control equipment and is sufficient to meet periodic monitoring requirements for opacity.

Division's response:

The testing requirements will not change.

COMMENT No 14

- Specific Monitoring Requirements, 4.f (p. 9) — As discussed in our meeting at the Division on September 13, 2002, this condition will be revised to read: "Pursuant to material incorporated by reference by 401 KAR 52:020, Section 10, to meet the periodic monitoring requirement for particulate, the permittee shall use a continuous opacity monitor (COM). ~~The average opacity level, determined pursuant to condition 3.a above, plus 5% opacity, will become the opacity trigger level.~~ Excluding the startup, shut down, *malfunction,* and once per hour exemption periods, if the six-minute ~~opacity~~ *opacity readings* (averaged over a period of three hours) exceed the opacity trigger level *set forth in 3.a above* the permittee shall, as appropriate, initiate an inspection of the control equipment and/or the COM system and make any necessary repairs.

  If five (5) percent or greater of COM data (excluding startup, shut down, malfunctions and once-per-hour exclusion periods, data averaged over a ~~six minute period~~ *three-hour period*) recorded in a calendar quarter show excursions above the opacity trigger level, the permittee shall perform a stack test in the following calendar quarter to demonstrate compliance with the particulate standard while operating at representative conditions. The permittee shall submit a compliance test protocol as required by condition Section G (a)(17) of this permit before conducting the test. The Division may waive this testing requirement upon a demonstration that the cause(s) of the excursions have been

corrected, or may require stack tests at any time pursuant to 401 KAR 50:045, Performance tests.

Division's response:

The concept of an opacity trigger level and the establishment of the five percent (5%) excursion in any calendar quarter standard was agreed to by the Division and the Utility Information Exchange. It identifies that point at which the facility will be required to take specific actions~~;~~-- inspection and repair of equipment or conducting a stack test. It is not a regulatory or permit limit; it is a description of the condition of operation that the Division has determined warrants corrective action. Its purpose was to ensure consistency between Regional Offices and individual inspectors so that utilities were not required to take different actions based on the same circumstances. Since it is based on an agreement that has met the purpose for which it was intended satisfactorily, the Division declines to change it in this permit. This trigger level has nothing to do with any opacity limit as specified in the applicable regulations. As it is based on a correlation test between mass emissions and opacity it only identifies the level of opacity at which a presumption is made that the mass emission limit may be exceeded, and therefore a corrective action (i.e., inspection and repair) is appropriate. Until TVA Paradise has a source specific SIP revision approved by U.S. EPA, the opacity limit will remain as specified by the regulations.

COMMENT No 15

- Specific Monitoring Requirements, 4.i.1 (p. 10) — This condition should be deleted. There is no applicable standard requiring that scrubber liquor flow rate be monitored. In addition periodic monitoring for sulfur dioxide will be accomplished by using CEMS.

Division's response:

The Division does not concur. Specific Monitoring Requirements, 4.i.1 (p. 10) is a monitoring requirement to record the pressure drop across the scrubber at least once per shift. These records are useful to ensure proper operation of an air pollution control device that is used to ensure compliance with the SO2 and PM allowable under 401 KAR 61:015. Compliance with the SO2 allowable can be determined through the SO2 CEM. It is our understanding that the source's position is that compliance with the PM limit is assured by compliance with the SO2 limit, as there is a common control device. The Division does not concur that this is the case in all circumstances. Compliance with the S02 limit is a function of the control device and concentration of sulfur in the fuel. Monitoring of the pressure drop is part of the compliance assurance that particulate emissions and opacity are in compliance.

This condition only requires some periodic recordkeeping to ensure proper operation of the control device, and is not a direct measure of compliance. In light of the fact opacity can not be monitored consistently at this stack to ensure compliance, the Division believes it is justified in requiring that records be maintained and be made available to the Division to demonstrate good air pollution control operation.

COMMENT No 16

- Specific Monitoring Requirements, 4.i.2 (p. 10) — This condition should be deleted. There is no applicable standard limiting operating hours. In addition, periodic monitoring for sulfur dioxide will be accomplished using CEMS.

Division's response:

The permit does not contain operating limitation on hours of operation. See response number 15 above.

COMMENT No 17

- Specific Record Keeping Requirements, 5.b (p. 10)—Delete "… on a three-hour rolling average basis," because a 3-hour rolling average is not used to determine compliance for these units. Replace "indicator range" with "*opacity standard*." This is consistent with Condition 6.b.

Division's response:

The three-hour rolling average is a standard for continuous opacity monitoring and will not be changed as requested. "Opacity standard" has been changed to "trigger level".

COMMENT No 18

- Specific Reporting Requirements, 6.a.1 (p. 10)—Revise the second sentence: "The averaging period used for data reporting should correspond to the emission standard averaging period ~~of twenty-four (24) hour~~." Opacity is not a 24-hour standard and the bases are listed in the emission limitations section.

Division's response:

The averaging period is for the sulfur dioxide limitation and will not change.

COMMENT No 19

- Unit 2 Scrubber By-Pass Capability - On May 28, 2003, TVA submitted an addendum to the Title V permit application for the Unit 3 Flue Gas Desulfurization Scrubber. This submittal included updated permit application forms and dispersion modeling results for different plant operating scenarios. The study indicates that the Unit 3 scrubber will reduce local ambient SO_2 levels and local SO_2 levels will remain below the National Ambient Air Quality Standards. This also demonstrated that the project meets the state and U. S. Environmental Protection Agency designation as an environmentally beneficial project.

As stated in the May 2003 submittal the design of the Unit 3 scrubber and associated ductwork incorporates provisions to by-pass the scrubber through the existing stack, if needed. TVA anticipates infrequent use of this by-pass capability once the scrubber is commission in late 2006. However, because we will have this capability it is important to address the following issues specifically in the proposed permit:

- Unit 3 Scrubber By-Pass Capability - The permit should include language in Description that addresses this capability.

- Unit 3 Emission Points - Once the new scrubber and new stack are commissioned in late 2006, Unit 3 will have two (2) emission points. The emission point represented by the current stack and the emission point represented by the new stack should be assigned separate numbers. These emission point identification numbers should be listed in the Description for this emission unit in the proposed permit.
- Unit 3 Opacity Continuous Monitoring - As discussed with the Division during the scrubber permit application process, when operation of the new scrubber commences, opacity monitoring will occur downstream of the electrostatic precipitators but upstream of the scrubber. The COMS system will be used in both normal and by-pass operation after the scrubber is commissioned in later 2006. The existing COMS system will be decommissioned after the system described above is in place.
- Unit 3 Sulfur Dioxide and Nitrogen Dioxide Emissions Monitoring - As discussed with the Division during the scrubber permit application process, when operation of the new scrubber commences, sulfur dioxide and nitrogen dioxide emissions monitoring will occur downstream of the scrubber at the appropriate point in the new stack. When the scrubber is by-passed sulfur dioxide and nitrogen dioxide emissions monitoring will occur at the current location in the existing stack. TVA will maintain the existing CEMS units in their current location as a contingency for scrubber by-pass events.

Division's response:

The Division does not have the regulatory authority to grant the scrubber by-pass capability at this time. The permittee may submit an application to the Division detailing stack and CEMs data to that effect when the scrubbers come on line in 2006.

COMMENT No 20

GACT4 (Emission Points 16 & 17) Existing Coal Handling Processes

1. Applicable Regulations
   - Specific Control Equipment Operating Conditions, 7.a (p. 16) — Revise to read: "The enclosure shall be maintained and the foam suppression system shall be ~~continuously~~ operated *as needed* to maintain compliance with the permitted emission limitations~~, in accordance with manufacturer's specification and/or good operating practices~~."

Division's response:

The compliance demonstration of these units with respect to emissions can be achieved through the continuous operation of the pollution control device, as such; the permit control equipment language will not change.

COMMENT No 21

GACT6 (Emission Points 15 & 18) Existing Coal Handling Fugitives

1. Applicable Regulations
   - Specific Monitoring Requirements, 4 (p. 17) - Propose that this condition be changed to read: "The amount of coal processed shall be monitored on a monthly basis *and maintained as a rolling 12-month total.*"

Division's response:

The changes have been made.

COMMENT No 22

EQPT15 (Emission Points 19) Two Lime Storage Silos

1. Applicable Regulations
   - Specific Monitoring Requirements, 4.a (p. 18) - Propose that this condition be changed to read: "The amount of lime processed shall be monitored on a monthly basis *and maintained as a rolling 12-month total.*"

Division's response:

The changes have been made.

COMMENT No 23

- Specific Control Equipment Operating Conditions, 7.a (p. 18) — Revise the condition as follows: "The ~~bagfilters~~ *air pollution control equipment* shall be ~~continuously~~ operated ~~to maintain compliance with the permitted emission limitations, in accordance with manufacturer's specifications and/or~~ *and maintained in accordance with* good operating practices *to ensure compliance with permitted emission limitations*."

Division's response:

The permit control equipment language will not change. See response to comment number 20.

COMMENT No 24

GACT5 (Emission Points 04 through14) Coal Washing Plant

1. Applicable Regulations
   - Operating Limitations, (p. 19) - Propose the addition of new condition that reads: "*Coal processed through Emission Unit GACT5 as defined herein shall not exceed 13,000,000 tons in any 12-month period.*"

Division's response:

The changes have been made.

COMMENT No 25

- Specific Monitoring Requirements, 4.a (p. 20) - Propose that this condition be changed to read: "The amount of coal processed shall be monitored on a ~~monthly~~ *daily* basis, *compiled into monthly totals, and maintained as a rolling 12-month total.*"

Division's response:

The changes have been made.

COMMENT No 26

- Specific Monitoring Requirements, 4.b (p. 20) - Propose this condition be deleted. There is no applicable standard limiting operating hours. Compliance assurance with 401 KAR 51:017 can be achieved by record keeping of coal tonnage processed on a daily basis and tabulated into a 12-month rolling total. Compliance demonstration with hourly and daily particulate matter emission limits will be achieved as defined in the application by throughput limits, emission factors, and the level of control applied to each emission point.

Division's response:

The only means to determine that the BACT standards are being met is through the monitoring of hours of operations, which is practically enforceable.

COMMENT No 27

- Specific Control Equipment Operating Conditions, 7.a (p. 20) — Revise to read: "The enclosure shall be maintained and the foam suppression system shall be ~~continuously~~ operated *as needed* to maintain compliance with the permitted emission limitations~~, in accordance with manufacturer's specification and/or good operating practices~~."

Division's response:

The permit control equipment language will not change. See response to comment number20.

COMMENT No 28

GACT7 (EQPT 21, 23, 25) Limestone Handling Process

1. Applicable Regulations

In our correspondence on January 30, 2004, TVA identified an exception in the 2003 compliance certification related to the limestone handling system. The permit application for the process reflects bagfilters on the prep building surge hoppers and the bagfilters were not operable during that compliance period. Emission estimates provided in January 2004 for the compliance period demonstrate that the limestone handling system met the emission standard for the source relying on transfer point & conveyor enclosures to provide sufficient emissions control.

PAF has operated the limestone handling system since 1982 and based on our experience operating this system, TVA has determined that the bagfilters on the system are not needed to control fugitive dust. Therefore, we propose that the bagfilters be removed from the permit application and from the proposed Title V permit.

Division's response:

Permitted requirement are not based on single year emission data, therefore the pollution control device will remain in the permit.

COMMENT No 29

- Emission Limitations, 2.b (p. 21) - Propose that this condition be changed to read: "Compliance *is demonstrated when* ~~will be assumed while bagfilters~~ enclosures are ~~utilized properly~~ *maintained in accordance with good operating practices to ensure compliance with permitted emission limitations*."

Division's response:

The permit control equipment language will not change. See response to comment number20.

COMMENT No 30

- Specific Control Equipment Operating Conditions, 7.a (p. 21) - Revise the condition as follows: "The ~~bagfilters~~ *enclosures* shall be ~~continuously operated to maintain compliance with the permitted emission limitations, in accordance with manufacturer's specifications and/or~~ *maintained in accordance with* good operating practices *to ensure*

compliance with permitted emission limitations."

Division's response:

The permit control equipment language will not change. See response to comment number20.

COMMENT No 31

GACT8 (EQPT 16, 18, & 20) Limestone Handling Fugitives

1. Applicable Regulations
   - Specific Monitoring Requirements, 4.a (p. 22) - Propose that this condition be changed to read: "The amount of limestone processed shall be monitored on a ~~monthly~~ *daily basis, compiled into monthly totals, and maintained as a rolling 12-month total*."

Division's response:

The changes have been made.

COMMENT No 32

- Specific Monitoring Requirements, 4.b (p. 22) - Propose this condition be deleted. There is no applicable standard limiting operating hours. Compliance demonstration with hourly and annual particulate matter emission limits will be achieved as defined in the application by throughput limits, emission factors, and the level of control applied to each emission point.

Division's response:

The Division believes this requirement is a necessary means of facilitating better information gathering for the unit.

COMMENT No 33

EQPT23 (Emission Point 30) Ash Handling System

1. Description (p. 23) To maintain consistency with other sections of the permit add individual process weight to each activity as follows:

Ash/Slag Reclaim from Slag Pond	134 tons/hr
Ash/Slag Reclaim from Dewatering Area	200 tons/hr
Ash/Slag Reclaim from Slag Pond	200 tons/hr

Division's response:

The changes have been made.

COMMENT No 34

2. Applicable Regulations
   - Operating Limitations (p. 23) - Propose deletion of operating limitation. There are no hourly or annual throughput restrictions for the Ash Handling System.

Division's response:

The operating limitation has been deleted.

COMMENT No 35

- Specific Monitoring Requirements, 4.a (p. 23) - Propose that this condition be changed to read: "The amount of ash and slag processed shall be monitored on a monthly basis

and annual throughput maintained as a rolling 12-month total."

Division's response:

The changes have been made.

COMMENT No 36

- Specific Monitoring Requirements, 4.b (p. 23) - This condition should be deleted. There is no applicable standard limiting operating hours. Compliance demonstration with particulate matter emission limits will be achieved as defined in the application by throughput limits, emission factors, and the level of control applied to each emission point.

Division's response:

See response to comment number 32.

COMMENT No 37

EQPT30 (Emission Point 42) Gypsum Handling

1. Description (p. 24)

- To maintain consistency with other sections of the permit modify description and add individual process weight to each activity as follows:

Sluicing to Gypsum Disposal Pond	108 tons/hr
Gypsum Dewatering/Drying	167 tons/hr
Excavation and Transport of Dewatered Gypsum	167 tons/hr
Soil Cover Transport	358 tons/hr

Division's response:

The changes have been made.

COMMENT No 38

2. Applicable Regulations

- Operating Limitations (p. 24) - Propose deletion of operating limitation. There are no hourly or annual throughput restrictions for Gypsum Handling.

Division's response:

The operating limitation has been deleted.

COMMENT No 39

- Specific Monitoring Requirements, 4.a (p. 24) - Propose that this condition be changed to read: "The amount of gypsum processed shall be monitored on a monthly basis *and annual throughput maintained as a rolling 12-month total*."

Division's response:

The changes have been made.

COMMENT No 40

- Specific Monitoring Requirements, 4.b (p. 24) - This condition should be deleted. There is no applicable standard limiting operating hours. Compliance demonstration with particulate matter emission limits will be achieved as defined in the application by throughput limits, emission factors, and the level of control applied to each emission

point.

Division's response:

See response to comment number 32.

COMMENT No 41

GACT10 (Emission Points 75 & 76) Unit 3 Limestone Handling (Under Construction)

1. Applicable Regulations

- Compliance Demonstration Method (p. 26) - Revise the sentence as follows: "Compliance is ~~assumed~~ *demonstrated* when the ~~baghouses and bin vents~~ *enclosures* for this emission unit are ~~operated continuously and~~ maintained ~~in accordance with manufacturer's recommendations~~ *in accordance with* good operating practices *to ensure compliance with permitted emission limitations*."

Division's response:

The permit control equipment language will not change. See response to comment number20.

COMMENT No 42

- Testing Requirements (p. 26) - Propose that this condition be deleted. Small baghouse dust collectors and bin vents are difficult to test using Method 5 or Method 17. In both cases it is unlikely that Method 1 and Method 2 can establish an appropriate and valid test point locations and discharge gas velocity profile, respectively. This is due to the compact nature of the clean-side plenum and arrangement of the discharge point (stack).

Division's response:

Kentucky does not have the authority to circumvent the requirement of a Federal New Source Performance Standard.

COMMENT No 43

- Specific Monitoring Requirements, 4.b (p. 26) - Propose that this condition be changed to read: "The amount of limestone processed shall be monitored on a monthly basis *and annual throughput maintained as a rolling 12-month total.*"

Division's response:

The changes have been made.

COMMENT No 44

- Specific Control Equipment Operating Conditions, 7.a (p. 27) - Revise the condition as follows: "The ~~baghouses and bin vents~~ *air pollution control equipment* shall be ~~continuously~~ operated ~~to maintain compliance with the permitted emission limitations, in accordance with manufacturer's specifications and/or~~ *and maintained in accordance with* good operating practices *to ensure compliance with permitted emission limitations*."

Division's response:

The permit control equipment language will not change. See response to comment number20.

COMMENT No 45

GACT11 (Emission Points 73, 74, & 77) Unit 3 Limestone Handling Fugitives (under construction)

1. Applicable Regulations
   - Specific Monitoring Requirements, 4.a (p. 28) - Propose that this condition be changed to read: "The amount of limestone processed shall be monitored on a monthly basis *and maintained as a rolling 12-month total*."

Division's response:

The change has been made.

COMMENT No 46
SECTION D

- Compliance Demonstration Method, (p. 32) - Revise the condition as follows: "Compliance is ~~assumed~~ *demonstrated* when the ~~bagfilters~~ *air pollution control equipment* is operated ~~continuously~~ and maintained ~~in accordance with manufacturer's recommendations~~ *according to good operating practices pursuant to 401 KAR 50:055, Section 2(5)*."

Division's response:

The permit control equipment language will not change. See response to comment number20.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.